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3' south of 26 *Cygni*. There is no star in DM at this place. The new star shows a spectrum III *Type*. It is Z *Cygni* = Chandler 7192. The place of 26 *Cygni* for 1887 is

$$A R = XIX^h 58^m 9^s$$

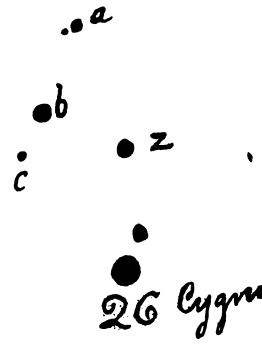
$$\text{Decl.} = + 49^\circ 46'.9$$

On the 22d April, 1887, I made a sketch of this region and then perceived that the mentioned star Z was equal in brightness to the star *b*. With respect to the intensity these stars must be thus ranged: 26, (*b*=Z), *a*, *c*.

On the 7th December, 1890, it was found that the star Z had decreased, for now the range is: 26, *b*, (*a*=Z), *c*.

At the end of the year the star Z was difficult to see. On 1891, January 1, 8^h P. M., I succeeded in observing the following sequence: 26, *b*, *a*, *c*, Z.

Besides the above mentioned observations, a great many reviews of sketches of the fixed stars have been made with reference to supposed variations.



ADDRESS OF THE RETIRING PRESIDENT OF THE SOCIETY, AT THE THIRD ANNUAL MEETING, MARCH 28, 1891.

BY EDWARD S. HOLDEN.

The Society has now been in existence for a little more than two years, and it is, perhaps, not too soon for us to look back over these short years, and to inquire how far we have fulfilled the mission in which we engaged, and especially to inquire what we must look forward to in the future.

Let us first bring together the obvious statistics of our history. On the 7th of February, 1889, a few of us who had been brought into close relations by the observations of the Solar Eclipse of the first of January, determined to form a little club, or society, which should perpetuate those relations, and which should make them fruitful. We began with a membership of 40, nearly all residents of San Francisco or of Santa Clara County. At the annual meeting, a year ago, our membership was 192. After exactly two years' existence

Publications of the

we count no less than 360 members (40 life, 320 active). Of the 44 States of the Union, we are represented in:

Arizona.....	1	Missouri.....	3
California.....	220	Nebraska.....	1
Colorado.....	1	Nevada.....	3
Connecticut.....	3	New Jersey.....	3
Florida.....	1	New York.....	11
Illinois.....	30	Ohio.....	3
Iowa.....	1	Oregon.....	1
Maine.....	1	Pennsylvania.....	7
Maryland.....	2	Vermont.....	1
Massachusetts.....	6	Washington.....	2
Michigan.....	4	Wisconsin.....	3
Minnesota.....	1	District of Columbia.....	6
Mississippi.....	1	New Mexico.....	1

Our foreign membership has grown amazingly, and it is important to us, not merely numerically, but because a very large proportion of our foreign members are working astronomers—either amateurs or professionals. They are at present distributed as follows:

Africa (C. G. Hope).....	1	New South Wales.....	2
Brazil.....	2	New Zealand.....	1
British Columbia.....	1	Norway.....	1
China.....	1	Nova Scotia.....	1
Denmark.....	1	Queensland.....	1
England.....	14	Scotland.....	1
France.....	1	Spain.....	1
Holland.....	1	Venezuela.....	2
Ireland.....	1	Victoria.....	2
Mexico.....	8		

Our publications are regularly sent to observatories and institutions in Albany, Algiers, Amherst, Ann Arbor, Armagh, Berkeley, Berlin, Berne, Bonn, Bordeaux, Brussels, Cambridge (U. S.), Cambridge (Eng.), Capetown, Chicago, Christiania, Cincinnati, Clinton, Cordoba, Dorpat, Dublin, Edinburgh, Fredricksburg, Geneva, Georgetown, Glasgow (Mo.), Glasgow (Scotland), Gotha, Greenwich, Hamburg, Hanover, Helsingfors, Karlsruhe, Kasan, Kiel, Koenigsberg, Kopenhagen, La Plata, Leyden, Leipzig, Lisbon, Liverpool, London, Lund, Lyons, Madison, Madras, Madrid, Marseilles, Melbourne, Menlo Park, Milan, Moscow, Mt. Hamilton, Munich, Naples, Neuchâtel, New Haven, Nice, Northfield, Oakland, Oxford, Palermo, Paris, Parsonstown, Potsdam, Prague, Princeton, Pulkowa, Rio de Janeiro, Rome, San Francisco, Santiago, Stockholm, Strassburg, Sydney, Tacubaya, Tokio, Toulouse, Up-

sala, University of Virginia, Vienna, Washington, West Point, Williamstown, Zurich.

The Society has lately taken a step which may be of great importance in the way of extending its usefulness. I allude to the formation of local sections. The first of these sections—the Chicago Section of the Astronomical Society of the Pacific—was organized in November, 1890, with a membership of nearly 30 to begin with.

The idea of these local organizations is to allow persons *who are already members of the A. S. P.*, and who live in the same neighborhood, to affect a closer union with each other through frequent meetings and mutual aid, than they could command if their only common bond were the regular reception of our *Publications*.

First and before all, they are members of the A. S. P., and their first loyalty is due to this Society. As members of the Society they desire to co-operate with each other closely, and thus to forward the very objects for which the Society exists. They do this by forming a local group, electing their own officers and making their own rules, paying their own local expenses and following their own plans of research. As they are, first of all, members of the A. S. P., the *Publications* are open to them, of right, whether individually or collectively. Whatever is sent to the parent body may be printed in the journal. And I must emphasize a very important point—the converse—whatever is *not* printed in the journal is entirely informal, and commits the Society in no possible way.

There are certain dangers in this organization, but, with good will, I think they can all be avoided. The parent Society must never seek to interfere with the doings of its members organized in sections, any more than it would interfere with the doings or sayings of an individual member. On the other hand, the several sections must carefully guard themselves from figuring as separate, co-ordinate Societies—but must cherish, first of all, an active loyalty to the parent stem, and regard their local organization simply as a form under which it has been found expedient to utilize their energy.

Our history for the next few years will fully test this new plan. Personally, I am of the opinion that it is not worth while for us to form such groups, unless the groups are tolerably large and likely to be active, as containing skilled observers, whether professionals or amateurs. The Chicago Section will serve as an admirable model, for it is large, and is likely to be larger. It has several observatories, public and private, which are tributary to it,

and, best of all, it contains several observers of great skill and experience.

The foregoing simple statistics show eloquently that our Society has, during its brief life, fulfilled its mission so far ; or, at least, they show that it is believed to have done so. We may all take a legitimate pride, not only in the number of our members, but also in the remarkable way in which they are scattered over the surface of the globe, from 174° of east longitude to 123° of west, from $59^{\circ} 54'$ of north latitude to $33^{\circ} 56'$ of south, and, I might add, from the sea level up to 4200 feet of altitude, in order to express our distribution in terms of all three co-ordinates.

But mere numbers do not constitute force, and the very scattering of our membership from the Cape of Good Hope to Norway, from Spain to Australia, may prove a source of weakness, and not of strength. It behoves us, then, to look into the future and to see what our duty is, and what we must do to fulfill it. It is the usual way to regard such questions : "What must we *do* ?" I would rather put the inquiry in its essence and ask : "What must we *be* ?" in order to fulfill our mission ; for our doing will follow directly from what we really are.

And here, as in so many other cases, it suffices if we take a clear view of what we are in fact, to enable us to see what we ought to be and must be.

No institution, no body or company of men can permanently flourish unless its members have a sense of corporate loyalty which is fit to master their personalities in matters where the interest of the individual and the interest of the Society or institution may seem to clash. In point of fact, the interest of each individual is apt to be the same as that of the company to which he belongs, and it is usually the highest worldly wisdom to strengthen one's surroundings, even if one has to sacrifice a little self-will. There is somebody who has more wit than anybody—and that is everybody. This trite remark may have no application to the Society at present, but, if it is borne in mind, we shall keep clear of difficulties which lie in the way of all organizations, especially when they become large and powerful—or when they even wish to do so. What, then, *are* we now, as a Society?

Our membership is practically of two kinds : We have Californian members (some 220 in number), and we have non-resident members (some 140).

Our California members are those alone who can be present at

our various meetings, whether here in San Francisco or there at Mt. Hamilton. They, alone, have the easy access to our Society rooms, to the Montgomery Library, to any observatory which we may establish in San Francisco. The organization of sections may give to out-of-town members similar advantages in a few cases, but to most of the non-resident members the Society is practically the journal which they regularly receive. It is by their right to contribute to this, and by the expectation that it will contain the information which they are seeking, that alone we hold their loyalty; and it is to the past excellence of the journal that we owe their accession. It is, then, the first duty of all the members to see to it that the *Publications* of the Society are of high quality and thoroughly well supported.

We can make them what we choose, and we should choose to make them such as the whole Society desires and needs. Their scope must be as wide as the interests of the individual members, and their quality should be of the highest. I do not mean by this that we should always write on difficult or obscure problems, but I mean that whatever problem is treated must be treated in the highest spirit, and that no lax work must enter in.

I could illustrate my meaning by pointing out in our *Publications* of the last year several articles, which seem to me to be models of their class; but, without specifying any particular paper, it will be clear to all of us that such admirable work will always be sure to command attention, interest and respect, and to insure that corporate vigor in the Society which reacts on the individual members and gives them what they seek for in association. In all our published writings we should strive to be as simple as practicable, as rigorous as the subject demands, as lucid and clear as it is possible to be, and entirely fearless and fresh. There is room in our journal for every variety of work, from the most technical to the most simple, just as the Society itself contains members who are at the very head of professional astronomy, as well as amateurs of every grade of skill—from those who have spent years in studying special problems at the telescope to others who have never made an observation, whose interest is chiefly in results, and who have no skill in methods. Our *Publications* must meet the desires of all these classes*.

* It may interest you to see the notice which the Royal Society of London has printed at the head of its Philosophical Transactions for more than a hundred years. This notice may well serve as a guide for your Committee on Publication:

* * * * * "But the Society being of late years greatly enlarged, and their communications more numerous, it was thought advisable that a committee of their members should be appointed to reconsider the papers read before them, and select out of them such as they should judge most proper for publication in the future *Transactions*, which was accordingly

If we are, as I have said, active, alive, modest, competent, we shall have no cause for fear. Our life, as a Society, and our expression of that life in our journal, will be a useful one, though it may not follow any classic pattern.

If we look back over the two volumes of our *Publications*, which are already completed, I think we shall feel that we have found at least the beginning of the way in which we must go.

One of our early dangers was, that the Society being local in name and in membership, might become local in its interests—intense, if you please, but narrow. Its close connection with the Observatory on Mt. Hamilton was both a strength and a danger—a danger of this very sort. I think we are now safe in this respect. Our membership is, as we have seen, widely scattered; but, better than this, the authors of our papers come from all over the world. They even now represent the Society as a whole, not a part of it; and if I should give you a list of the papers which are already promised to us for the next year, you would at once see that they truly represent the Science and the Society at large, and not a mere fraction of it. Our *Publications* for the next year will show this. The *Notices from the Lick Observatory*, which were begun as a mere experiment, seem to have proved themselves useful. They afford the astronomers of the Observatory a prompt and ready means of announcement, and they give the members of the Society a current history of the work which is going on from month to month. They are popular in form, and yet they have contained matter of the first importance, both in their references to original work done at Mt. Hamilton and in their abstracts of such work done elsewhere.

In one respect I confess to a sense of disappointment in the *Notices*. I had hoped that some of them, at least, might be reprinted by the local newspaper press, and serve to supply the need for popular science of which we hear so much. But it appears that they are either overlooked by the editor with the scissors, or that they need another dilution before they can be used in this most useful way.

I must repeat what I said at our last annual meeting, that the members of the Society can help the diffusion of knowledge in no more effective way than by furnishing to the newspapers in their

“done upon the 26th of March, 1752. And the grounds of their choice are, and will continue “to be, the importance and singularity of the subjects, or the advantageous manner of treating “them; without pretending to answer for the certainty of the facts, or propriety of the reason- “ings contained in the several papers so published, which must still rest on the credit or judgment of their respective authors.”

vicinity abstracts of the work done by the Society, or done by other persons and referred to in our journal.

I think it very important, also, that we should not forget that we are a society of amateurs. The professional members of our body, whether resident or non-resident, will, no doubt, always contribute their full share, or even more than their full share, to our publications. But the government of the Society should always be in the hands of the non-professional members, and, in fact, the Board of Directors has been so constituted in the past, and should be so constituted in the future. You can utilize the professional members for Secretaries, for the Committee on the Comet Medal or on Publication, but the real government and policy of this society of amateurs should remain in the hands of amateurs. I felt so strongly upon this point at our last election that I was very unwilling to serve as President for a second term, and I am confident that it is necessary to establish the custom of a regular change in your presiding officer. The laborious work of a Society is always done by a few men and I am sure that no member will shrink from labors assigned to him ; but the general policy and tendency must be a truly representative one. It will be evident to all of you that your officers of the past year have not shrunk from any work which their duties imposed upon them, since all work is done by volunteers—and I think it only right to say that our Secretaries and Treasurer have done, with only the slightest clerical aid, far more than we could justly have asked of them.

Our relations with other societies are most pleasant in all respects, and for very many reasons. We have no possible rivalries with societies at home or abroad. At home we have our own modest field, and we are cultivating it as well as we know how. Abroad, we can only feel a lively sympathy with the efforts of other bodies like our own.

Both at home and abroad our safeguard is in the motto which we have practically adopted, *to work, and not to compete.*

Young as we are, it is a pleasant thought that we are senior to something ! Since the formation of the Astronomical Society of the Pacific a new society has been established on the same broad basis—namely, the British Astronomical Association. Some of our members are also members of the B. A. A., and a number of their founders are members of the A. S. P. likewise.

I am sure that I may, in your name, extend to the new Society our heartiest, best wishes for its success, as well as our thanks to the

older societies for the courtesies which we have received at their hands.

There is no better proof of the cordiality of our relations with our correspondents—astronomical societies, observatories and individuals—all over the world, than the list of the gifts which we owe to their kindness. The Catalogue of our Library is a marked evidence of this, and our thanks are due and are extended to all who have contributed to it.

In closing this brief address I think I can fairly say that our Society has more than fulfilled the hopes of its founders. It is already established in useful and important relations, and it depends simply on ourselves—that is, on each one of us—to extend and perfect these relations. Personally, I may be permitted to thank the many members who have contributed, in one way or another, to lightening the work of the officers of the Society, and I am confident that the good will and earnestness which has made my own task pleasant and easy, will support and assist my successor.

THE ASTRONOMICAL OBSERVATORY OF THE UNIVERSITY OF ALABAMA*.

“The astronomical observatory was completed in the summer of 1844. The building was originally fifty-four feet in length by twenty-two in breadth in the center. Fourteen years afterward (in 1858) another apartment, forty feet in length by twenty in width, was added to the east wing. The west wing is occupied by a transit circle, constructed by SIMMS, of London, having a telescope of five feet focal length, with an object-glass of four inches clear aperture. The limb is three feet in diameter, divided in five minutes, and read by four microscopes to single seconds. Accompanying the transit circle is a clock with mercurial compensation, constructed by MOLYNEAUX, of London. The central apartment is surmounted by a revolving dome of eighteen feet internal diameter, under which is placed an equatorial telescope, constructed also by SIMMS, of London. This telescope has a clear aperture of eight inches and a focal length of twelve feet, and is mounted after the manner of the celebrated Dorpat instrument constructed by FRAUENHOFER. It is provided with a parallel line position micrometer, a double-image micrometer, and with a very

* We owe to the courtesy of Dr. W. T. HARRIS, U. S. Commissioner of Education, the permission to print the accompanying plate.